

SECTION 01560 – CONSTRUCTION CLEANING

Part 1 – General

1.01 Related Work.

a. The Drawings and provisions of the General Conditions, Supplementary Conditions and the Sections included under Division 1, General Requirements are included as a part of this Section as though bound herein.

1.02 Summary.

a. The Contractor shall act on behalf of the Owner pertaining to the clean-up responsibilities that are a part of the Contractor's Work. Article 3.15, "Cleaning-Up," included in the General Conditions and the statement concerning clean-up which is included in the Scope of Work, will serve as the required 7 day notice called for in Paragraph 2.4.1 of the General Conditions.

1.03 Daily Cleaning.

a. Contractor shall remove his rubbish and debris to on site disposal units (Dumpsters) to guard against fire and safety hazards as well as to provide a more efficient construction operation. If this cleaning is not performed to the satisfaction of the Owner and the Architect, it will be performed for the Contractor at his expense.

1.04 Routine Cleaning.

a. Each Friday afternoon, and more often if necessary, Contractor shall perform an overall cleanup of the Project, including a broom cleaning of appropriate surfaces. The trades shall remove their rubbish and debris from the building site to the rubbish collection location promptly upon its accumulation and in no event later than the Contractor's regular Friday general cleanup. The Contractor shall provide a suitable location on the site with a sufficient quantity of rubbish bins and shall be responsible for the removal of rubbish from the site. If this cleaning is not performed to the satisfaction of the Owner and the Architect, it will be performed for the Contractor at his expense.

1.05. Final Cleaning.

a. Contractor shall perform an overall cleanup of the entire site, including a broom cleaning and dusting of appropriate surfaces. The trades shall remove their rubbish and debris from the building and site to the rubbish collection location.

b. If this cleaning is not performed to the satisfaction of the Owner and the Architect, it will be performed for the Contractor at his expense.

c. Contractor shall also provide special/institutional cleaning as part of the final cleaning. This work shall be sub-contracted to a professional cleaning service.

1.06 Rubbish Container(s)

a. The Contractor shall provide dumpster type rubbish container(s) that are adequately sized for the waste, debris and rubbish for the life of the Project.

b. The Contractor shall dispose of container(s) contents weekly or at more frequent intervals if required by inadequate container capacity.

c. Oily and/or other volatile waste and rubbish shall not be placed in the standard rubbish containers, but shall be stored in separate approved containers in an exterior location at least 100 feet from the building until legally disposed of offsite.

1.07 Cleaning Safety Requirements.

a. Comply with authorities having jurisdiction and AGC recommendations. Submit and make available MSDS information on each cleaning product on the project site.

b. Hazards Control:

1. Store volatile wastes in covered metal containers and remove from premises daily.

2. Prevent accumulation of wastes which create hazardous conditions.

3. Provide adequate ventilation during use of volatile or noxious substances.

c. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.

1. Do not burn or bury rubbish and waste materials on project site.

2. Do not dispose of volatile wastes such as mineral spirits, oil or paint thinner in storm or sanitary drains.

3. Do not dispose of wastes into streams or waterways.

Part 2 – Products

2.01 Materials.

a. Use only cleaning materials recommended by manufacturer of surface to be cleaned.

b. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

Part 3 – Execution

3.01 Daily Cleaning.

a. Contractor shall execute cleaning to ensure that building, grounds and public properties are maintained free from accumulations of waste materials and rubbish.

b. Daily, during progress of work, clean site and public properties and dispose of waste materials, debris and rubbish in dumpster type rubbish container provided under this Section.

c. Schedule cleaning operation so that dust and other contaminants resulting from cleaning process will not fall on wet, newly painted surfaces.

d. Place no new work on dirty surfaces.

3.02 Routine Cleaning.

a. Employ experienced workmen for cleaning.

b. Remove dirt, mud and other foreign materials from sight exposed interior and exterior surfaces.

c. Weekly or at more frequent intervals if work activities justify same, perform the following cleaning. This includes all dirt, dust and debris not identifiable as part of a Contract. Broom clean floor and paved surfaces; rake clean other surfaces of ground.

d. Maintain cleaning throughout the life of the Project.

e. Should the Contractor fail in the performance of this Work, the Owner may perform such Work in accordance with Article 2 of the General Conditions.

3.03 Final Cleaning.

a. Contractor shall perform his respective final cleanup and shall leave the Work of the complete Project in clean, neat condition.

b. The following are examples, but not by the way of limitation, of cleaning levels required:

1. Remove labels which are not required as permanent labels.

2. Clean transparent materials, including mirrors and window/door glass to a polished condition, removing substances which are noticeable as vision-obscuring materials. Replace broken new or existing glass materials damaged during construction.

3. Clean exposed exterior and interior hard –surfaced finishes to a dirt-free condition, free of dust, stains, films and similar noticeable distracting substances.

a. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.

4. Wipe surfaces of mechanical and electrical equipment clean, including elevator equipment and similar equipment; remove excess lubrication and other substances.

5. Remove debris and surface dust from limited-access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics and similar spaces.

6. Clean concrete floors in unoccupied spaces broom clean.

7. Vacuum clean carpeted surfaces and similar soft surfaces.

8. Clean plumbing fixtures to a sanitary condition, free of stains, including those resulting from water exposure.

9. Clean light fixtures and lamps so as to function with full efficiency.

10. Clean project site (yard and grounds), including landscape development areas of litter and foreign substances. Sweep paved areas to a broom-clean condition, remove stains, petro-chemical spills and other foreign deposits. Rake grounds which are neither planted nor paved to a smooth, even textured surface.

11. Clean out storm drains and catch basins.

3.04 Special/Institutional Cleaning Requirements.

a. The following items of work shall be sub-contracted to a professional cleaning service:

1. Final floor maintenance (sweeping, mopping, sealing and waxing).

2. Cleaning of surfaces with detergent or mild chemical solvent type cleaners as required to remove dirt and stains. Verify compatibility of cleaners and surfaces prior to use.

3. Dusting and waxing of finished surfaces (example casework, counter tops, window trim and other equipment and furniture items.

b. Coordinate with Owners maintenance staff for normal cleaning procedures used to assure compatibility.

End of Section.

SECTION 01600 - MATERIALS AND EQUIPMENT

01. Related Documents:

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

02. Summary:

This Section specifies administrative and procedural requirements governing the Contractor's selection of products for use in the Project.

a. Multiple Prime Contracts: Provisions of this Section also apply to the construction activities of each prime Contractor if bid Multiple Prime.

b. Standards: Refer to Section "Definitions and Standards" for applicability of industry standards to products specified.

Administrative procedures for handling requests for substitutions made after award of the Contract are included under Section "Product Substitutions - 01631".

03. Definitions:

a. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.

b. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

c. "Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature, that is current as of the date of the Contract Documents.

d. "Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.

e. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

04. Quality Assurance:

Source Limitations: To the fullest extent possible, provide products of the same kind, from a single source.

When specified products are available only from sources that do not or cannot produce a quantity adequate to complete project requirements in a timely manner, consult with the Architect for a determination of the most important product qualities before proceeding. Qualities may include attributes relating to visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources that produce products that possess these qualities, to the fullest extent possible.

a. Compatibility of Options: When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

Each prime Contractor is responsible for providing products and construction methods that are compatible with products and construction methods of other prime or separate Contractors.

If a dispute arises between prime Contractors over concurrently selectable, but incompatible products, the Architect will determine which products shall be retained and which are incompatible and must be replaced.

b. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view in occupied spaces or on the exterior.

1. Labels: Locate required product labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface that is not conspicuous.

2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface which is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:

Name of product and manufacturer.

Model and serial number.

Capacity.

Speed.
Ratings.

05. Product Delivery, Storage, and Handling:

Deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.

Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.

Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.

Deliver products to the site in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.

Inspect products upon delivery to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected.

Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.

Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.

Store products subject to damage by the elements above ground, under cover in a weathertight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

06. Product Selection:

a. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, unused at the time of installation.

Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.

b. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.

c. Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include the following:

1. Proprietary Specification Requirements: Where only a single product or manufacturer is named, provide the product indicated. No substitutions will be permitted.

2. Semiproprietary Specification Requirements: Where two or more products or manufacturers are named, provide one of the products indicated. No substitutions will be permitted.

Where products or manufacturers are specified by name, accompanied by the term "or equal," or "or approved equal" comply with the Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.

f. Non-Proprietary Specifications: When the Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.

g. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.

h. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.

Manufacturer's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.

i. Compliance with Standards, Codes and Regulations: Where the Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.

j. Visual Matching: Where Specifications require matching an established Sample, the Architect's decision will be final on whether a proposed product matches satisfactorily.

Where no product available within the specified category matches satisfactorily and also complies with other specified requirements, comply with provisions of the Contract Documents concerning "substitutions" for selection of a matching product in another product category, or for noncompliance with specified requirements.

k. Visual Selection: Where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Architect will select the color, pattern and texture from the product line selected.

l. Allowances: Refer to individual Specification Sections and "Allowance" provisions in Division-1 for allowances that control product selection, and for procedures required for processing such selections.

07. Installation of Products:

Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other work.

Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION

SECTION 01631 - PRODUCT SUBSTITUTIONS

01. Substitutions:

Prior to Opening Bids: Where items of material and/or equipment are specifically identified here by manufacture's name, model, or catalog number, only such items may be used in the Base Bid, except as hereinafter provided.

If a Contractor wishes to use items of equipment other than those specifically mentioned, he shall apply in writing to the Architect for approval of substitution at least seven (7) days prior to opening bids, submitting with his request complete descriptive and technical data on items or item he proposes to furnish. Approval for changes in Base Bid specifications will be granted only upon individual request of prime bidding contractors. Approvals will be by addendum only.

END OF SECTION

SECTION 01700 - PROJECT CLOSEOUT

Part 1 – General

1.01 Related Documents.

a. The Drawings and provisions of the General Conditions, Supplementary Conditions and the Sections included under Division 1, General Requirements are included as a part of this Section as though bound herein.

b. Refer to the General and Supplementary Conditions of the Contract for Substantial Completion and Final Payment.

c. Refer to the “Closeout Documentation Checklist” form included under “Project Forms and Check Lists”.

1.02 Summary.

a. This Section includes administrative and procedural requirements for contract closeout.

b. Closeout is hereby defined to include general requirements near the end of the Contract Time in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner and similar actions evidencing completion of the Work. Time of closeout is directly related to “Substantial Completion.”

c. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 16.

1.03 Prerequisites to Substantial Completion.

a. Preliminary Procedure: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.

a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.

b. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction and reasons the Work is not complete.

2. Advise the Owner of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates and similar releases.
5. Submit record drawings, maintenance manuals, final project photographs, damage or settlement surveys, property surveys and similar final record information.
6. Deliver tools, spare parts, extra stock and similar items.
7. Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.
8. Complete startup testing of systems and instruction of the Owner's operation and maintenance personnel. Discontinue and remove temporary facilities from the site, along with mockups, construction tools and similar elements.
9. Complete final cleanup requirements including touchup painting.
10. Touchup and otherwise repair and restore marred, exposed finishes.
11. Complete final cleaning operations (excluding institutional cleaning) before requesting inspection for certification of Substantial Completion.
12. The Contractor shall provide a Punch List of items to be completed with a proposed time for completion signed by the Contractors Project Superintendent.
 - a. After the work on the list is completed and after Substantial Completion, prior to requesting the Final Completion inspection, the Contractor shall submit certification that all items on the Contractor's and Architect's punch lists have been completed.
 - b. Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.

1. The Architect will repeat inspection when requested and assured that the Work is substantially complete.

2. Results of the completed inspection will form the basis of requirements for final inspection.

3. Refer to General and Supplementary General Conditions for additional information and requirements.

4. Complete and submit the following list of items prior to requesting a final inspection:

a. A written statement from each of the Prime contractors stating that all “pre-final” punch list items have been satisfactorily addressed.

b. Copies of certificates of approval by all authorities having jurisdiction over the work.

c. Satisfactory testing and balancing reports of the HVAC systems.

d. Satisfactory results of electrical system testing.

e. “As-built” Documentation.

f. Executed copies of outstanding change orders.

g. Copies of warranties from equipment manufacturers and material suppliers.

h. Any other documentation required to verify completion of the Project in accordance with the contract documents.

i. Final cleaning operations (including institutional cleaning).

1.04 Prerequisites to Final Acceptance.

a. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.

1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted.

2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.

3. Submit a certified copy of the Architect’s final inspection list of items to be completed or corrected, endorsed and dated by the Architect. The certified copy (signed by the Contractors Project Superintendent) of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Architect.

4. Submit final meter reading for utilities, a measured record of stored fuel and similar data as of the date of Substantial Completion or when the Owner took possession of and assumed responsibility for corresponding elements of the Work.

5. Submit consent of surety to final payment.

6. Submit a final liquidated damages settlement statement.

7. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

a. Submit final payment request.

b. Submit copy of Architect/Engineer final punch list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance.

c. Submit record drawings, maintenance manuals and similar final record information.

d. Certification of code compliance.

e. Submit certification stating that no materials containing asbestos were incorporated into the Work.

b. Re-inspection Procedure: The Architect will re-inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Architect.

1. Upon completion of re-inspection, the Architect will prepare a certificate of final acceptance. If the Work is incomplete, the Architect will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.

2. If necessary, re-inspection will be repeated.

3. Refer to General and Supplementary General Conditions for additional information and requirements.

1.05 Record Document Submittals.

a. General: Do not use record documents for construction purposes. Protect record documents from deterioration and loss in a secure, protected location. Provide access to record documents for the Architect's reference during normal working hours.

1. Furnish to the Architect, with the Record Documents, a completed signed copy(s) of the "Certificate of Accuracy" covering work performed under contract. Copy and use form included.

b. Record Drawings: Maintain a clean, undamaged set of blue or black line white prints of Contract Drawing and Shop Drawings. Mark the set to show the actual installation where the installation varies from the Work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work.

2. Mark new information that is important to the Owner but was not shown on Contract Drawings or Shop Drawings.

3. Note related change order numbers where applicable.

4. Organize record drawing sheets into manageable sets. Bind sets with durable paper cover sheets; print suitable titles, dates and other identification on the cover of each set.

c. Record Specifications: Maintain one complete copy of the Project Manual, including addenda and negotiated items. Include with the Project Manual one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction.

1. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.

2. Give particular attention to substitutions and selection of options and information on concealed construction that cannot otherwise be readily discerned later by direct observation.

3. Note related record drawing information and Product Data.

4. Upon completion of the Work, submit record Specifications to the Architect for the Owner's records.

d. Record Product Data: Maintain one copy of each Product Data submittal. Note related Change Orders and markup of record drawings and Specifications.

1. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.

2. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation.

3. Upon completion of markup, submit complete set of record Product Data to the Architect for the Owner's records.

e. Record Sample Submitted: Immediately prior to Substantial Completion, the Contractor shall meet with the Architect and the Owner's personnel at the Project Site to determine which Samples are to be transmitted to the Owner for record purposes. Comply with the Owner's instructions regarding delivery to the Owner's Sample storage area.

f. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to the Architect for the Owner's records.

g. Maintenance Manuals: Prior to issuance of final payments, Contractor shall submit (3) O&M (Operations and Maintenance) Manuals. Organize operations and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual, heavy-duty, 2-inch, 3-ring, vinyl-covered binders with clear cover pocket for insertion of project specific cover, and with interior pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder.

1. Each titled item in manual must provide the names, addresses and phone numbers of the following parties:

- Contractor/installer
- Manufacturer
- Neared dealer/supplier
- Nearest agency capable of supplying parts and service

2. Each manual label on front cover or spine shall indicate the following information:

- Project name and address
- Owner's name
- Name and address of Architect
- Name and address of Contractor
- Date of submission

3. Include the following types of information:

- Emergency instructions
- Spare parts list
- Copies of warranties
- Wiring diagrams
- Recommended "turn-around" cycles
- Inspection procedures
- Shop Drawings and Product Data
- Fixture lamping schedule
- Preventative Maintenance Procedures & Schedules

Part 2 – Products (Not Applicable)

Part 3 – Execution

3.01 Closeout Procedures.

a. Prior to the Architect's preparation of a Project Punch List, Contractor shall prepare and keep his own punch list on the job for use by his employees and subcontractors and for use by the Architect to facilitate completion of the Work.

b. The Contractor's inspection shall be as thorough as possible, in accordance with his desire to provide first class workmanship and to maintain a good reputation and shall include Work under his Contract, including that of his subcontractors.

c. The Architect shall observe the Work, providing Work on the Contractor's punch list has been completed, and prepare the Project Punch List for use by the Contractor to expedite proper completion of the Work.

d. Operation and Maintenance Instruction: Arrange for each Installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures.

1. Include a detailed review of the following items:

- Maintenance manuals
- Record documents
- Spare parts and materials
- Tools
- Lubricants
- Fuels
- Identification systems
- Control sequences
- Hazards
- Cleaning
- Warranties and bonds
- Maintenance agreements and similar continuing commitments

2. As part of instruction for operating equipment, demonstrate the following procedures:

- Startup
- Shutdown
- Emergency operations
- Noise and vibration adjustments
- Safety procedures
- Economy and efficiency adjustments
- Effective energy utilization

3.02 Final Cleaning.

a. General: The General Conditions require general cleaning during construction. Regular, site and final cleaning is included in Division 1, Section 01560, Construction Cleaning.

b. Cleaning: employ experienced workers and professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Refer to Section 01560 for additional information.

c. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid the Project of rodents, insects and other pests.

d. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.

e. Waste Disposal: Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully. Comply with regulations of authorities having jurisdiction.

1. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Dispose of these materials as directed by the Owner.

3.03 Closeout.

The form "Closeout Documentation Checklist" shall be completed and all items on the checklist resolved to the satisfaction of the Owner and Architect before final payment will be made.

END OF SECTION

SECTION 01740 - WARRANTIES AND BONDS

01. Contractor shall submit to Architect before final payment, three (3) copies of all warranties, guarantees, certificate of bills paid, release of liens and surety bonds on the work, as required under his Contract. All such documents shall show name of Project, Location, and Name of Owner.

02. The Contractor shall guarantee the building for one (1) year after acceptance of same unless stipulated otherwise for individual portions of the building or any portion thereof be guaranteed for less than one (1) year after acceptance. Provide letter stating such for this particular project on Contractor letterhead.

03. The Contractor shall furnish a letter to Owners certifying that materials used in the work contained no lead or asbestos.

04. Bid Security:

Each Bid shall be accompanied by a cash deposit, a certified check drawn on some bank or trust company insured by the Federal Deposit Insurance Corporation, or a Bid Bond executed by a Surety Company licensed under the laws of N.C. to execute such bonds. The amount of such bid security shall be equal to 5% of the bid.

a. Bid security shall be retained by Owner as liquidated damages in event of failure of successful bidder to execute Contract within ten (10) days after award or to give satisfactory surety as required by law (General Statutes of N.C., C.143, Art. 8, S.129).

b. Bid Bond, if submitted as security, shall be conditioned that the Surety will upon demand forthwith make payment to the obligee upon said bond if the Bidder fails to execute the Contract in accordance with the Bid Bond, and upon failure to forthwith make payment, that the Surety shall pay to the obligee an amount equal to said Bond.

05. Performance and Payment Bond:

An AIA Performance and Payment Bond will be required in an amount equal to one hundred percent (100%) of the Contract Price. Bond shall be delivered to the Architect within ten (10) days after the notice of acceptance of Proposal. FORM OF PERFORMANCE BOND for this project will be AIA Document A311.

END OF SECTION

SECTION 01800 - CONTRACT FORM

01. FORM OF CONTRACT for this project will be the STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR (where the basis of payment is a STIPULATED SUM), latest edition, AIA Document of the American Institute of Architects. The form of contract may be reviewed in the office of the Architect or may be obtained from the American Institute of Architects, 1735 New York Avenue, NW, Washington, D.C. 20006.

END OF SECTION

SECTION 01900 - SPECIAL PROVISIONS

01. Operations.

The Owner will vacate the area identified as Limits of Work and turn over to the Contractor for the allotted time to complete the work in this project. All other parts of the building shall be able to maintain all operations in a safe and secure manor at all times. Provide all necessary means to protect employees and the public. Provide required barriers to keep public and other unauthorized persons out of the work area at all times. Contractor shall be responsible for securing this part of the building after hours.

The Owner will make every reasonable effort to accommodate this work as long as the Courthouse remains a safe environment and the business of the County and Courts can be appropriately conducted. The Owner shall have the final say on any deviation from the schedule. Work may be done after hours with prior permission from the Owner. Work in ENTRY 101 shall be done after hours or on weekends unless prior permission is given.

02. Worker Identification.

Every individual working for each contractor including all subcontractors and their subcontractors, etc. shall be required to wear an identification badge which includes that person's name, company and photo. Anyone not wearing such badge shall leave immediately if asked to do so by the Owner. Failure to do so will be grounds for calling the Police. No one may pass outside of the limits of work onto other parts of the campus without prior permission from the Owner.

03. Limits of Work.

Limits of work shall be defined as noted on the Life Safety Plan, sheet LS1.1. Work may be done in Area 101 only with prior approval from the Owner. Owner will work to accommodate work in this area as much as possible with the schedule of other functions of the Courthouse.

04. Staging Area.

All access to the work area shall be through door at the rear of the building near WALK OFF 109. All materials shall be brought in this entrance. Small amounts of staging will be allowed on the grass outside this entrance. ENTRY 101 shall remain open and functioning at all times during business hours of the County and Courts for safe public use unless prior permission is granted.

05. Contractor Parking.

All parking for contractors and their workers shall be in the public parking lot on 3rd Street east of 74.

06. Project Schedule.

This project shall adhere to the following Project Schedule (2013). See Section 01021 – Liquidated Damages for liquidated damages associated with this project.

| | |
|------------------------|--------------|
| Bids Received | August 13 |
| Contract Awarded | August 20 |
| Work on site may begin | September 12 |
| Work completed | October 16 |

07. Owner Procured Items.

The Owner has ordered the carpet for this project. It shall be delivered to the Contractor before it is time to be installed. Contractor shall receive and store the carpet in a bonded and insured warehouse until time for the carpet to be installed. Contractor shall provide proof of bond and insurance for the warehouse within ten days of award of the contract for this project. Contractor shall bring the carpet to the job site and install the carpet at the appropriate time.

The Owner has ordered cubicles for this project as shown on sheet A1.3. The cubicle company shall be responsible for installing the cubicles. The Contractor shall coordinate with the cubicle supplier to have the cubicles installed at the proper time to meet the overall Project Schedule. The cubicle supplier shall have a minimum of five days to install the cubicles. Contractor shall contact the cubicle supplier with an adequate amount of time for the cubicle supplier to schedule his installation. Contractor shall coordinate the work of all his sub-contractors and his workers to expedite and facilitate the installation of these cubicles.

End of Section.

DIVISION 5

METALS

SECTION 05400 - LIGHTGAUGE METAL FRAMING

01. General:

a. Related Documents:

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

b. Description of Work:

Lightgauge framing as shown on drawings for steel framing in exterior walls and roof. Types of lightgauge framing units include the following:

"C" shaped load-bearing steel studs.

"C" shaped steel joists.

c. Quality Assurance:

Component Design: Compute structural properties of studs in accordance with AICS's *Specification for Design of Cold-Formed Steel Structural Members*.

d. Submittals:

Product Data: Submit manufacturer's product information and installation instructions for each item of lightgauge framing and accessories.

Shop Drawings: Submit shop drawings for special components and installation not fully dimensioned or detailed in manufacturer's product data.

Include placing drawings for framing members showing size and gauge designations, number, type, location and spacing. Indicate supplemental strapping, bracing, splices, bridging, accessories, and details required for proper installation.

e. Delivery and Storage:

Protect metal framing units from rusting and damage. Deliver to project site in manufacturer's unopened containers or bundles, fully identified with name, brand, type and grade. Store off ground in a dry ventilated space or protect with suitable waterproof coverings.

02. Products:

a. Metal Framing:

System Components: With each type of metal framing required, provide manufacturer's standard steel runner (tracks), blocking, lintels, clip angles, shores, reinforcements, fasteners, and accessories as recommended by manufacturer for applications indicated, as needed to provide a complete metal framing system.

Materials and Finishes: Fabricate metal framing components of structural quality steel sheet with a minimum yield point of 40,000 psi, ASTM A446, A570, or A611.

Provide galvanized finish to metal framing components complying with ASTM A525 for minimum G60 coating.

Studs, Joints, Accessories: Manufacturer's standard load-bearing steel studs and joints of size, shape, and gauge indicated on drawings and/or gauge indicated within these specifications. Unless otherwise indicated, provide minimum 16 gauge components.

Available Manufacturers: Subject to compliance with requirements, manufacturer's offering products which may be incorporated in the work include, but are not limited to, the following:

Alabama Metal Industries Corp.
Bostwick Steel Framing Co.
Dale Industries, Inc.
Inryco/Milcor.
Marino Industries Corp.
U.S. Gypsum
Unimost Incorporated

b. Fabrication:

General: Framing components may be prefabricated into panels prior to erection. Fabricate panels plumb, square, true to line and braced against racking with joints welded. Perform lifting of prefabricated panels in a manner to prevent damage or distortion.

Fastenings: Attach similar components by welding. Attach dissimilar components by welding, bolting, or screw fasteners, as standard with manufacturer.

Wire typing of framing components is not permitted.

03. Execution:

a. Installation:

Manufacturer's Instructions: Install metal framing systems in accordance with manufacturer's printed or written instructions and recommendations, unless otherwise indicated.

Runner Tracks: Install continuous tracks sized to match studs. Align tracks accurately to layout at base and tops of studs. Secure tracks as recommended by stud manufacturer for type of construction involved, except do not exceed 24" o.c. spacing for nail or powder-driven fasteners, or 16" o.c. for other types of attachment. Provide fasteners at corners and ends of tracks.

Set studs plumb, except as needed for diagonal bracing or required for non-plumb walls or warped surfaces and similar requirements.

Where stud system abuts masonry walls, anchor ends of stiffeners to supporting structure.

Install supplementary framing, blocking and bracing in metal framing system wherever walls or partitions are indicated to support fixtures, equipment, services, casework, heavy trim and furnishings, and similar work requiring attachment to the wall or partition. Where type of supplementary support is not otherwise indicated, comply with stud manufacturer's recommendations and industry standards in each case, considering weight or loading resulting from item supported.

Installation of Wall Stud System: Secure studs to top and bottom runner tracks by either welding or screw fastening at both inside and outside flanges.

Frame wall openings larger than 2'-0" square with double stud at each jamb of frame except where more than 2 are either shown or indicated in manufacturer's instructions. Install runner tracks and jack studs above and below wall openings. Anchor tracks to jamb studs with stud shoes or by welding, and space jack studs same as full-height studs of wall. Secure stud system wall opening frame in manner indicated.

Install horizontal stiffeners in stud system, spaced (vertical distance) at not more than 4'-6" o.c. Weld at each intersection.

Installation of Joists: Install level and plumb, complete with bracing and reinforcing as indicated on drawings. Provide not less than 1½" end bearing.

Reinforce ends with end clips, steel hangers, steel angle clips, steel study section, end grain wood block, or as otherwise recommended by joist manufacturer.

Where required, reinforce joists at interior supports with single short length of joist section located directly over interior support, snap-on shoe, 30% side-piece lapped reinforcement, or other method recommended by joists manufacturer.

Secure joists to interior support systems to prevent lateral movement of bottom flange.

END OF SECTION

DIVISION 6
WOOD & PLASTICS

SECTION 06410 - PRE-MANUFACTURED CASEWORK (PLASTIC LAMINATE)

01. Scope.

This Section includes furnishing of all labor, materials, equipment, tools, transportation, storage and installation required for a complete casework installation including countertops and accessory items as detailed on drawings and specified herein.

Work Not Included:

1. Finish carpentry and millwork unless otherwise noted on drawings or specified herein.
2. All blocking in walls.
3. Plumbing fixtures, electrical accessories and mechanical hookups.
4. Wood or vinyl base.

02. Materials.

a. Product: The cabinets shown on the drawings and specified in this section are as manufactured by Merchandising Fixtures, Inc., Minneapolis, Minnesota, Southside Manufacturing Company, Straight Line Cabinet Corporation, or approved equal. Products from other manufacturers may be considered providing prior approval is requested in writing within the allowable limits set by the specifications. Comparable casework must conform to design, quality of materials, workmanship and function of the casework specified and shown on the plans.

b. Cabinet Bodies: The sides, tops, and bottoms to be 19mm (3/4"), 45 lb. density, industrial-grade particle board, both faces laminated with champagne-colored melamine for a balanced construction and finish. Exposed end panels shall be laminated with vertical-grade, high-pressure laminate, color as selected, on the exterior and balanced with champagne-colored cabinet liner on the interior. All exposed edges shall be banded with high-pressure laminate. The sides, top and bottom shall be drilled to house construction dowels and dadoed to receive the back. These panels shall also be predrilled for hardware such as hinges, slides, shelf supports, or special accessories.

c. Cabinet Backs: All cabinets shall have backs made of 6.35mm (1/4") 64 lb. density hardboard with champagne-colored melamine. They shall set into the dadoes in the sides, top and bottom; bonded with a combination of hot melt and white glue. The back shall be recessed to allow an additional 15.9 mm (5/8") thick material to be applied for installation support.

d. Shelving: Standard shelves to be 19mm (3/4") 45 lb. density, industrial-grade particle board, covered on two sides with champagne-colored melamine and edgebanded with champagne PVC. Extra wide shelves over 914mm (36") to be 25.4mm (1") substrate. All shelves will be adjustable every 32mm (1-1/4"), and supported by nylon-coated steel pins. Shelving which will be exposed (**i.e. not behind doors**) shall be laminate, color as selected.

e. Drawers: The drawer body shall be on 15.9mm (5/8") particle board laminated with champagne-colored melamine, two sides and edges with champagne-colored PVC. The bottom shall be 6.35mm (1/4") hardboard, laminated with champagne-colored melamine. A dowelled construction shall be used in combination with a dado held bottom. Both white glue and hot melt shall be used for strength and squareness. Extra wide drawers will receive bottom applied stiffener boards.

f. Sub-base: Standard sub-base shall be 4" in height. 19mm (3/4") exterior grade plywood shall be supplied in linear lengths to be field cut and assembled by the installer.

g. Doors and Drawer Fronts:

1. Standard front panels to be 45 lb., industrial-grade particle board with vertical grade high pressure laminate, color as selected on the exterior face and balanced with champagne-colored cabinet liner on the interior, totaling 19mm (3/4"). Edging shall be high-pressure laminate. Both the door and drawer panels shall be pre-machined for pulls. Projecting pulls to be shipped loose and semi-recessed pulls to be factory applied.

2. Drawer faces to be pre-mounted with adjustable, eccentric fittings allowing final adjustment in the field.

3. Bumpers shall be applied behind door panels for alignment and noise reduction.

h. Edges: High-pressure laminate in color as selected (on door, drawer front and cabinet body).

i. Hinges: Concealed, 170 degree, fully adjustable, self-closing. Two hinges shall be used on doors through 36" high, three on doors up to 60", four on heights at 61-80" and five on 81-91" doors.

j. Slides: A captive-profile, white epoxy-coated slide with positive stops shall be used on standard drawers. For optimum space usage a full-extension slide with like detail shall be used on file drawers and where otherwise specified. Both slides to be rated at 100 lb. capacity.

- k. Pulls: Wire pull in finish selected by Owner.
- l. Closet Rods: 1-1/16" chrome plated steel tube with sockets.

m. Counter Tops: Counter tops shall be horizontal-grade, high-pressure plastic laminate bonded to an industrial-grade particle board substrate. Tops shall be rolled on the edges. Tops will be balanced with a backer sheet on the underside and edged. Alternate 1 shall be granite counter tops instead of plastic laminate – see drawings.

n. Plastic Laminate: Subject to compliance with requirements, manufacturers offering high pressure decorative plastic laminates which may be incorporated in the work include but are not limited to the following:

Formica Corp.
Laminart.
Nevamar Corp.
Ralph Wilson Plastics Co.
Sterling Engineered Products, Inc.
Wilsonart, or approved equal.
All plastic laminate must meet NEMA LD3.

03. Delivery.

All casework to be properly protected in transit. Storage shall be in a ventilated building, not exposed to extreme differences in temperature and humidity. Do not store or install casework in the building until concrete, masonry and plaster work is dry.

04. Installation.

Installation shall be by qualified craftsmen experienced in the setting of factory-built cabinets. Casework shall be erected straight, level and plumb securely anchored in place. It shall be scribed and closely fit to adjacent work, cut to fit around pipes, ducts, etc. All items shall be complete with surfaces clean and free from defects with all moving parts operating properly.

05. Guarantee.

All materials to be guaranteed for one year against defects in materials and workmanship.

End of Section

DIVISION 7
THERMAL & MOISTURE
PROTECTION

SECTION 07200 - INSULATION

01. Scope.

This Section includes furnishing of all labor, materials, equipment, tools, transportation, storage and installation of insulation as shown on drawings and specified herein.

02. Materials.

a. Sound Attenuating Insulation:

1. Un-faced batt insulation size as required to fill walls shown on drawings.

03. Installation.

a. Install batt insulation in areas as shown on the drawings. Batt insulation shall be well fitted and supported in its required location, fitting tightly around pipes, ducts, outlets, etc., and in accordance with manufacturer's instructions.

END OF SECTION

DIVISION 8
DOORS & WINDOWS

SECTION 08110 - METAL DOORS AND FRAMES

01. Scope.

a. This Section includes furnishing all labor, materials, equipment, tools, transportation, and storage for complete installation of all metal doors and frames as shown on drawings and as specified herein. Include anchors, spreaders, floor clips, fasteners, hardware preparation and associated work.

b. Standards. Meet requirements and recommendations of applicable portions of standards listed:

American Society for Testing & Materials
ASTM
United States of America Standard Institute
USASI
Underwriter's Laboratories, Inc. UL
North Carolina Building Code

02. Materials and Fabrication.

Hollow metal doors shall be made of commercial quality, level, cold rolled steel conforming to ASTM A-366 or A-620 and ASTM A568 and free of scale, pitting or other surface defects - all doors shall be strong, rigid and neat in appearance, free from warpage or buckle. All doors shall be constructed with smooth, flush, surfaces, without visible joints or seams on exposed faces, except around glass lite trim or louvers.

a. Glass stop and moldings standard glass trim kits are steel-fixed moulding all securely welded to the door on both sides and are mounted flush with face of door 5/8" high glass stops are fastened to framed opening by counter-sunk sheet metal screws. Moulding and glass stops provide pockets to receive lites up to 1/4" thick with wet glazing. No glass kit trim to protect past face of door.

b. Steel Frames. Interior steel frames to be fabricated of 16 ga. cold rolled steel; corners to be welded and ground smooth. Exterior frames and all frames with openings greater than 36" wide shall be 14 ga. cold rolled steel; corners to be welded and ground smooth. Provide 3 anchors each side and floor angle clips with 2 holds for anchoring to floor. Frames shall be prepared at factory from proper templates furnished by hardware supplier for all mortise type hardware and shall be reinforced for all surface applied hardware. All hardware cutouts shall have at least 1/8" plate reinforcement welded to jamb and shall be protected in masonry partitions by dust covers. Frames shall have removable angle spreaders securely fastened to bottom of jambs. All frames shall be finished inside and out with rust inhibitive primer. Frames shall be as manufactured by The Ceco Corporation, Chicago, Ill., D&D Specialties, Inc. or approved equal.

c. Metal embossed panel exterior doors shall be 16 gauge extra heavy duty, Grade III by Versador or approved equal. Embossed panels shall be 18 gauge cold-rolled steel face sheets. Provided minimum R-15.27. Glazing shall be insulating type.

03. Installation.

a. Provide adjustable T-anchors of 16 ga. crimped or bent metal at least 2-1/2" wide and 10" long on each jamb of frame. Install no less than three (3) anchors on each side of door buck.

b. Install frames plumb, secure and in true alignment. Provide proper bracing to hold in position until built in completely. Anchor door frames to floor slab with two counter sunk expansion bolts at each jamb. Space between masonry and back of frames shall be grouted solid with mortar.

04. Special Requirements.

Shop Drawings: Contractor shall submit shop drawings for frames. Drawings shall clearly show details of fabrication, anchorage, reinforcement, and installation method.

END OF SECTION

DIVISION 9

FINISHES

SECTION 09250 - GYPSUM WALLBOARD

01. Scope.

a. This Section includes furnishing materials, labor, equipment, tools, transportation, and storage for complete installation of all drywall work scheduled and detailed on drawings and specified herein.

b. Standards. Meet requirements and recommendations of applicable portions of standards listed:

American Society for Testing & Materials ASTM
Gypsum Association GA
U.S. of America Standards Institute USASI
(ASA)
North Carolina Building Code

c. Fire Resistance Ratings. Comply with fire-resistance ratings as shown and as required by governing authorities and codes. Provide materials, accessories and application procedures which have been listed by UL or tested according to ASTM E-119 for the type of construction shown.

d. Delivery and Storage of Materials. Coordinate delivery with installation to minimize storage periods at the project site. Deliver in manufacturer's unopened containers, bundles or packages, fully identified with manufacturer's name, brand, type and grade. Protect from weather, soiling and damage using handling equipment and storage techniques recommended by the manufacturer.

e. Installer must examine all parts of the supporting structure to which gypsum drywall systems are to be applied and the condition under which gypsum drywall systems are to be installed. Notify the Contractor, in writing, of any conditions detrimental to the proper and timely completion of the work. Do not proceed with the installation until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

f. Construction Tolerances for Gypsum Drywall Work. Do not exceed 1/8" in 8'-0" variation from plumb or level in any exposed line or surface, except at joints between units do not exceed 1/16" variation between planes of abutting edges or ends. Shim as required to comply with specified tolerances.

g. Protection of Finish Work. Installer shall advise Contractor of proper procedures for the protection of completed drywall work from damage or deterioration until acceptance of the work.

02. Materials.

a. Manufacturer.

1. For all gypsum drywall work throughout project, provide drywall materials, including wallboard, accessories, fasteners, and finishing materials produced by one manufacturer.

2. Provide gypsum drywall materials produced by one of the following manufacturers:

National Gypsum
US Gypsum
BPB America, Inc.

b. Gypsum Wallboard. Provide gypsum wallboard as noted on plans, complying with ASTM C36 with paper face surface suitable to receive decorated finish with long edges tapered to receive manufacturer's standard joint treatment, unless otherwise shown. Thickness shall be 5/8" unless otherwise shown.

c. Lightweight Framing: Cold-rolled from galvanized steel and designed for screw attachment of wallboard. Provide floor and ceiling runners of same gauge material as studs. Use 25 ga. material.

d. Drywall Accessories

1. Fasteners. Provide screw-type fasteners of size recommended by drywall manufacturer for application shown.

2. Rigid furring channels. Screw type furring channels complying with ASTM C645 fabricated from 25ga. steel with manufacturer's standard zinc protective coating.

3. Metal Trim Accessories. Provide trim accessories of sizes required for drywall application shown and specified, fabricated from galvanized steel, and of the following:

(a) At external corners provide metal corner bead with smooth rigid nose and perforated and knurled metal flanges.

(b) For protection of exposed wallboard edges around openings, provide metal casing bead trim of the following design: Beaded nose with exposed flange knurled for joint treatment. Where kerfed jambs are shown, provide trim with special leg designed for insertion into jamb slot.

4. Adhesive. Durabond, or as recommended by the manufacturer.

e. Joint Treatment Materials.

1. Joint Tapes. Plain or perforated complying with ASTM C475.

2. Joint Compounds. Adhesive with or without fillers complying with ASTM C475. Provide in dry powder form or pre-mixed ready for application and as follows:

(a) Single Compound Treatment. Provide manufacturer's single component compound for both bedding and finishing joints.

(b) Two-Compound Treatment. Provide compatible joint compounds, one compound for bedding and the other compound for finishing joints.

3. Provide either type of joint compound treatment specified above at the Contractor's option.

03. Installation.

a. Standards. Comply with the requirements of ANSI A97-1 "Standard Specifications for the Application and Finishing of Wall Board" unless otherwise specified or recommended by the manufacturer. The term "manufacturer" defines the gypsum wallboard manufacturer unless otherwise noted.

b. Provide drywall of the thickness shown, or if not shown, provide not less than the minimum thickness recommended by the manufacturer for the application shown.

c. Provide additional framing and blocking as required to support gypsum board at openings and cutouts, and to support built-in anchorage and attachment devices for other work.

d. Form control joints in drywall construction where shown. Allow 1/2" continuous opening between edges of adjacent drywall boards to allow for insertion of control joint trim accessory.

e. Single Layer Application.

1. Partition/Walls. For heights of 8'-2" or less, apply gypsum board vertically or horizontally at contractor's option. For heights greater than 8'-2" or for areas less than 4' wide, apply vertically. Use floor to ceiling length boards for vertical applications and locate edge joints over supports, but offset at least one stud on opposite faces of partition/walls. Use maximum practical length boards for horizontal applications and locate end joints over supports and stagger in alternate courses of board.

2. Ceilings. Apply gypsum board with long dimension at right angles to supports (horizontal application) with end butt joints located over supports. Use maximum practical length boards to minimize and locate as far away from center of ceiling as possible.

3. Metal & Wood Supports. Fasten gypsum wallboard with screws. Comply with manufacturer's instructions for fastening, but do not exceed 12" oc spacing.

04. Finishing.

a. Temperature and Humidity Conditions. Do not install joint treatment compound unless installation areas comply with minimum temperature and ventilation requirements recommended by manufacturer and conditions are acceptable to installer.

b. Finish Exposed Drywall Surfaces with joints, corners and exposed edges reinforced or trimmed as specified, and with all joints, fasteners heads trim accessory flanges and surface defects filled with joint compound in accordance with manufacturer's recommendations for a smooth, flush surface. Drywall finishing work will not be considered acceptable if corners or edges do not form true level or plumb lines, or if joints, fastener heads flanges of trim accessories or defects are visible after application of field-applied decoration. Walls and ceiling not exposed need not have sanded finish but taping and mudding shall be required.

c. Joint and Corner Reinforcing.

1. Use joint tape to reinforce joints formed by tapered edges or butt ends of drywall units and at interior corners and angles. Set tape in joint compound then apply skim coat over tape in one application.

2. Where open spaces of more than 1/16" width occur between abutting drywall units, (except at control joints) prefill joints with joint compound and allow prefill to dry before application of joint tape.

3. Reinforce external corners of drywall work with specified type of corner bead.

4. Securely fasten metal corner beads as recommended by the manufacturer.

e. Edge Trimming.

1. Provide specified type of metal casing bead trim. Install in single unjointed lengths unless run exceeds longest available stock length.

2. Coordinate installation of trim continuously with drywall installation.

3. Insert control joint strips into open joint and staple flanges to drywall in accordance with manufacturer's instructions.

e. Application of Joint Compound.

1. Use only compatible compounds from one manufacturer. After mixing, do not use joint compounds if recommended pot-life time has expired.

2. Allow drying time between applications of joint compound in accordance with manufacturer's recommendations for the relative humidity and temperature levels at the time of application. In no case, allow less than 24 hours drying time between applications of joint compound.

3. Apply not less than three (3) separate coats of joint compound over joints, fastener heads and metal flanges.

END OF SECTION

SECTION 09300 - TILE

01. Scope.

a. This Section includes furnishing materials, labor, equipment, and incidentals necessary to install the ceramic tile, quarry tile and marble work shown on the drawings and specified herein.

b. Contractor shall examine all surfaces to receive this work and report any defects in same in writing to the Architect, and shall not proceed until such defects have been corrected. The starting of work by this Contractor shall imply his acceptance of the work of others.

c. See Room Finish Schedules and Details on the drawings.

02. Materials.

a. Ceramic Tile. Shall be of domestic manufacturer, Standard Grade, complying with the requirements of TCA 137.1-76 and shall be the product of American Olean Tile Co., Mosaic Tile Co., US Ceramic Tile Co., Mid-State Tile Co., Florida Tile Co., Dal-Tile Company, or approved equal.

1. Floors.

a. Thin set applications: Vitreous, cushion edge unglazed tile of selected colors in 8" x 8" tile; Price Groups 1, 2 and 3.

2. Walls. Standard grade, 4-1/4" x 4-1/4", cushion edge, semi-gloss glazed units, including coved internal corners and bases. Tile to be Price Group 2. Accent tile will occur in certain areas – see drawings.

3. Base. 4" high semi-gloss finish cove base of selected colors, with straight top; internal and external angle full tile where required.

b. Marble Thresholds. An approved gray or white marble, with honed finish, 5-1/4" wide x 3/4" thick, beveled to suit floor conditions. Submit sample for approval. CULTURED MARBLE IS NOT ACCEPTABLE.

c. Porcelain Tile. Shall be of domestic manufacturer meeting or exceeding A137.1 ANSI Standard and ADA requirements. Shall be colored throughout. Tile shall be "Formations" 12' x 12", by Florida Tile or approved equal by American Olean, Mosaic Tile Co., U.S. Ceramic Tile Co., Mid State Tile Co. or Dal-Tile Company.

d. Quarry Tile. Shall be of domestic manufacturer, Standard Grade, complying with the requirements of TCA 137.1 and shall be the product of American

Olean Tile Co., Mosaic Tile Co., U.S. Ceramic Tile Co., Mid-State Tile Co., Dal-Tile Company or approved equal.

1. Floors. Tile of selected colors in 6" x 6" tile; Color Groups 1 and 2.
2. Base. Cove base of selected colors to match floor with straight top; internal and external angle full tile where required.

e. Setting Materials.

1. Floors. Dry-set mortar or latex-portland cement mortar in accordance with ANSI A118.1-1967 or A118.4-1973 respectively – see drawings for application.

2. Walls. Organic adhesive meeting ANSI A-136.1-1967, Type II.

3. Porcelain Tile Floors. Latex modified thin set in accordance with ANSI.

f. Grout. Commercial portland cement and mastic conforming to the recommendations of the Tile Council of America, Inc.

g. Samples. Submit samples of all materials for approval and selection of color (complete range).

h. Extra Quantities. Supply 2% of each tile used in clean marked cartons for Owner's use.

03. Setting.

a. Ceramic Floor Tile. Installed in accordance with TCA method F112-2K. Where necessary, any approved underlayment shall be used to bring the concrete surface to the proper level to receive the tile floor in accordance with TCA, Inc. recommendations.

b. Wall Tile. Tile shall be installed in accordance with TCA method W242-2K.

c. Quarry Tile. In accordance with installation TCA method F112-2K for quarry tile floor and TCA method W202-2K for quarry tile base.

d. Porcelain Tile. Installed using TCA method F113-2K for porcelain floor tile and TCA method W202-2K for porcelain tile base.

e. Grout. Use sanded Portland Cement Grout for all joints 1/8" or greater and unsanded grout for joints 1/15" in width.

04. Correction of Work.

Defective, broken, pailed, or otherwise damaged material shall not be delivered to or set in the building. Work damaged at the site shall be promptly remove and replaced with perfect material at the expense of this Contractor. Where setting mortar shows through grout, the mortar and surrounding grout shall be removed so that new grout can be placed.

05. Cleaning.

Upon completion of the various portions of this work, this Contractor shall remove all unused materials, debris, etc., in connection with this contract and shall give the work a thorough cleaning, to the satisfaction and approval of the Architect. No acids or harsh abrasive cleaner shall be used.

END OF SECTION

SECTION 09512 - ACOUSTICAL TILE CEILINGS

01. Scope.

This Section includes furnishing labor, materials, equipment, tools, transportation, and storage for complete installation of acoustical work scheduled and detailed on the drawings and specified herein. All acoustical ceilings this project are part of a 1 hour rated floor/ceiling assembly as shown on drawings.

02. Materials.

a. Ceiling Tile: By Armstrong World Industries, Inc. as listed below or equal by Celotex Corp., USG Interiors, Inc. or approved equal.

Fire rated

Ultima 24" x 24" x 3/4" white factory finished w/ tegular edge

b. Suspension System: Suspended ceiling system shall be fire rated system as manufactured by Donn Corporation, Armstrong World Industries, USG Interiors, Inc., or approved equal. Components shall be formed from commercial quality, cold-rolled, prepainted steel. The Suspension System shall support the ceiling assembly shown on the drawings with maximum deflection of 1/360 of span. The ceiling pattern shall be as shown on drawings with following components. Ceiling shall meet seismic requirements.

1. Main tree with double web design and with rectangular bulb; with 15/16" face on lower exposed flange and with a rolled cap; with cross tee holes at 6" oc; with an integral reversible splice; with "fire-rated" controlled expansion where rated ceiling is shown on drawings.

2. Cross tee with double web design and with rectangular bulb. Lower flange extended and offset to provide flush level intersection with controlled expansion.

3. Wall molding of a channel or angle shape with prefinished exposed face.

4. Finish shall be pre-coated baked white satin enamel steel cap throughout.

03. Installation.

The intent of the following provisions is to provide an unrestrained ceiling system that will accommodate the movement of the structure during a seismic event. The objective is to have a free-floating ceiling.

Submit samples of grid and tile for approval.

Qualification of Mechanics: Work of this section shall be performed by mechanics skilled in the erection of sound rated acoustical systems.

a. Each individual fixture and attachments with a combined weight of 56 lbs. or less shall have two No. 12 gauge wire hangers attached at diagonal corners of the fixture. These wires must be slack. Any fixture and attachments with a combined weight greater than 56 lbs. must be independently supported from the structure.

b. The main runner/cross runner intersections and all grid splices must have an average ultimate test strength of 60 lbs. or more in both tension and compression. The tensile test must allow for a 5 degree offset of the connection in any direction.

c. The actual average weight of the ceiling system, including grid, panel or tile, light fixtures, and air terminals must be 2.5 lbs./SF or less. All other services must be supported independently from the ceiling system. For ceilings that have an average weight greater than 2.5 lbs./SF, the ceiling may be installed as specified in Zone 3-4 provisions, taking into account the design lateral force factor appropriate for Zone 2. Other deviations or variations must be substantiated by verifiable engineering data.

d. The ceiling system cannot be used to provide lateral support for walls or partitions. Walls or partitions may be attached to the ceiling grid provided they allow the ceiling membrane to move laterally to accommodate the required clearance as specified below.

e. All perimeter closure angles or channels must provide a support ledge of approximately 7/8 in. or greater. A terminal end of a grid member (or tile) must rest on the ledge or molding with at least 3/8 in. clearance from an edge or wall.

For perimeter closure angles that provide a support ledge of less than noted above, the terminal ends of each cross runner or main runner shall be independently supported within 8 in. from each wall or ceiling discontinuity. This support may be a No. 12 gauge hanger wire or other support that prevents the grid from falling. This wire does not need to be vertical but should not have a slope greater than 1 in 6 out-of-plumb. A 3/8 in. grid end clearance from a wall should be maintained.

f. At wall closure ledges, the cross runner and main runner ends shall be prevented from spreading apart from each other. Permanent attachment (i.e., pop rivets) for grid alignment purposes shall not be permitted.

g. For essential facilities, perimeter support of each cross runner and main runner, as aforementioned in item 5, is required. In addition, a 1/2 in. grid end clearance from a wall should be maintained.

h. All light fixtures shall be protected with acoustical fire rated panels as in accordance with UL Laboratories approved protection methods if fire rated ceilings are shown on the drawings.

i. Delivery: Deliver all materials in their original unopened packages, containers or bundles, bearing the manufacturer's name and the brand.

j. Storage: Store materials in an enclosed shelter providing protection from damage and exposure to the elements.

k. Environmental Conditions: Install ceiling units in accordance with the Acoustical and Insulation Materials Association recommendations.

1. Installation shall not begin when the building is excessively cold or damp.

2. Temperature and humidity conditions closely approximating the interior conditions that will exist when the building is occupied should be maintained before, during, and after installation.

l. Extra Materials: Provide the Owner with four (4) additional unopened cartons of extra acoustical units.

m. Discrepancies: The Architect shall be informed of discrepancies between this specification and manufacturer's printed literature as well as changes in recommendations prior to actual installation.

n. Contractor shall allow for variations in dimensions. Masonry walls on plans are dimensioned nominally - not actual wall thickness.

04. Warranty.

a. Defects in materials and workmanship that occur within one year from date of substantial completion of the project, including noticeable warping, shrinking, or sagging of acoustical ceiling units, units showing discoloration or cracking, peeling, and scaling of paint or painted work, or rusting of suspension system members shall be corrected as directed by the Architect.

b. Defects in materials and workmanship that occur within one year from date of substantial completion of the project, including peeling, scaling of paint, or rusting of suspension system members shall be corrected as directed by the Architect.

END OF SECTION

SECTION 09680 – CARPET TILE

01. General.

1. Scope.

a. General Conditions, Supplementary Conditions, and Division 1 of these specification govern work herein.

b. Owner has already purchased the carpet. The carpet is Gradient carpet tile by Shaw Contract Group. The Contractor shall be required to receive and store carpet from supplier until it is needed and then install as specified and shown. Contractor shall provide proof of insurance to the Owner for the location the carpet will be stored in the amount to cover all costs of replacing the carpet. Contractor shall be prepared to receive carpet immediately after award of contract. Contractor shall be responsible for delivering the carpet to the job site at the appropriate time. All left over carpet shall be turned over to the Owner. The Owner is purchasing only the carpet tile itself. All other materials for a complete and finished installation shall be the responsibility of the Contractor.

c. Furnish all other labor, materials, and incidentals necessary to complete soft surface flooring and accessories where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

2. Quality Assurance.

a. Installation must be performed by a firm with not less than five (5) years of experience in installation of commercial carpet, by methods similar to those required for this project.

b. Installation must be performed by an installer that is approved by the manufacturer to coordinate with warranties offered by the manufacturer.

c. Manufacturer is required to notify Owner, Architect, and General Contractor if installation instructions are not completely followed.

5. Delivery and Storage.

a. Deliver all material in manufacturer's original wrapping and identification labels.

6. Job Conditions.

a. Coordinate installation of carpeting with preparations for

project substantial completion and close-out. Delay installation until space enclosures and other general finish work has been completed; and until construction traffic in carpeted areas will be minimal; and until ambient conditions are being maintained by operation of HVAC system to comply with a minimum temperature of 65°F in spaces to receive flooring for a period of forty-eight (48) hours prior to and during the installation.

02. Materials.

1. See article 01. 1. b. above.

03. Execution.

1. Pre-Inspection and Preparation.

- a. Pre-inspection:

Installer must examine substrate and conditions under which carpeting is to be installed, and notify Contractor in writing of conditions detrimental to proper completion of the work. Do not proceed with installation of carpeting until unsatisfactory conditions have been corrected in a manner acceptable to installer and carpet manufacturer.

Do not install carpet over concrete with either excessive moisture or dust producing surface which is not adequately sealed.

Concrete must be checked for excessive moisture content or hydro-static moisture content. Excessive moisture is defined as no more than 5.0 lbs. per 1000 square feet in 24 hours.

Concrete should be checked for acidity/ alkalinity and should test in the 6.0 to 8.0 range.

3. Installation.

- a. Installation of carpet must proceed in strict accordance with manufacturer's printed installation instructions. This includes the use of Shaw Industries recommended adhesives and seam sealers supplied by the manufacturer to insure compliance with all warranties offered by the manufacturer and specified in section 3.1

- b. Clear away debris, cementious deposits, and similar obstructions on substrate to receive carpeting. Fill cracks and voids including honeycombed concrete, but do not obstruct expansion joints.

- c. Verify that substrate surfaces are smooth and flat with maximum variation of 1/8 inch in 10ft (3mm in 3m) and are ready to receive work.

d. Sequence carpeting installation with other work in a manner which will minimize possibility of damage or deterioration to carpeting, and yet not delay completion of projects.

e. Comply with manufacturer's instructions and recommendations. Place seams in directions indicated, and as accepted on shop drawing if any. Maintain direction of pattern and texture, including lay of pile.

f. Apply seaming adhesive on edge of carpet at seams, without being evident on the face of carpet but securing all yarns along the seam.

g. Beginning of installation means acceptance of existing substrate and site conditions.

3. Protection and Cleaning.

a. Remove rubbish, wrapping and debris.

b. Upon completion, vacuum with a pile lifter or commercial beater-bar type vacuum cleaner.

c. After each area of flooring is installed, protect from soiling and damage from other trades. Advise Contractor of areas to be protected during the remainder of the construction period so that the carpet will be in undamaged and unsoiled condition at time of acceptance.

d. All usable remnants shall be left for Owner's future use. Deliver specified overrun and usable scrap materials to Owner's designated storage space as directed, properly packaged/ protected and identified.

END OF SECTION

SECTION 09900 - PAINTING

01. Scope.

a. This Section includes furnishing all materials, labor, equipment, tools, transportation, and storage for application of complete painting and finishing of all surfaces scheduled on drawings, specified herein, and reasonably implied.

b. Work Included: All work having prime coats applied as specified in other Sections shall be fully finished with number of coats of paint as hereinafter described in schedule.

c. Standards. Meet requirements and recommendations of applicable portions of standards listed:

American Society for Testing & Materials ASTM
Federal Specifications FS
U.S. of America Standards Institute USASI
North Carolina Building Code

02. Material.

a. Kind. For purposes of establishing a minimum standard of quality ICI Dulux PAINTS are listed. All paints, enamels, varnishes, etc., shall be the best representative kinds as manufactured by ICI Dulux PAINTS, Sherwin-Williams, Martin Senour, Pittsburg Paint Coatings, Devoe or Benjamin Moore & Co. Deliver materials to job in original containers. Stain shall be manufactured by Olympia Stains, a division of PPG, Inc., or approved equal.

b. Colors. This Contractor shall furnish as many colors and color combinations as may be selected by the Architect for the exterior and interior work. Before any work is done, the Architect will furnish the contractor a set of color cards and a schedule showing where the various colors and color combinations shall be.

c. Samples. Provide samples for approval of all materials and colors as required.

d. Storing. The contractor shall store his materials and tools in a room assigned for the purpose. This room shall be used for mixing of paints, due protection being given against marring any finish by using drip cloths. Precaution shall be taken to prevent fire.

03. Preparation of Surfaces.

a. Painting Contractor shall be wholly responsible for finish of his work, and therefore, shall not commence any part of it until surface is in proper condition in every respect. If painting contractor considers any surface so unsuitable for proper finish of his work that it cannot be rectified, he shall notify the General contractor of this fact before any materials are applied, and he shall not apply any material until the unsuitable surfaces have been made satisfactory.

b. All knots or sappy spots shall be given one coat of shellac at least ten hours before painting.

c. All necessary spackling of nail holes, cracks and blemishes in woodwork shall be done after priming coats have become hard and dry, and before second coat is applied. Spackle shall match the shade of the finish coat.

d. All greasy or oily metal surfaces shall be cleaned with mineral spirits before applying any paint. All scale or rust shall be removed by scraping or wire brushing. Galvanized surfaces shall be suitably primed or treated in preparation for painting.

04. Application.

a. Priming. Exterior and interior millwork except that receiving a natural finish, shall be primed (brushed-not roller coated), all over before erection. Touch up all abraded parts of prime coat on metal or apply prime coat if necessary, before applying any finish coats.

b. Structural Steel. Field coat of metal paint of specified suppliers different color than shop coat. Touch up all abrasions to shop coat, welds, bolts, etc., before applying field coat. See specifications for Structural Steel.

c. Exterior Work.

1. Woodwork

*First Coat - 2110 ULTRA-HIDE DURUS Alkyd
Primecoat

*Second Coat - 2200 DECRA-SHIELD Acrylic Flat
Finish

*Third Coat - 2200 DECRA-SHEILD Acrylic Flat.
Colors selected by Architect.

2. Metal Work (Ferrous only)

*First Coat - 4130 DEVSHIELD Rust Penetrating Metal
Primer

- *Second Coat - 4308 DEVGUARD Alkyd Industrial Gloss Enamel.
- *Third Coat - 4308 DEVGUARD Alkyd Industrial Gloss Enamel.

Colors selected by Architect.

3. Metal Work (Galvanized)

- *First Coat - 4120 DEVGUARD All Purpose Metal and Galvanized Primer
- *Second Coat - 4308 DEVGUARD Alkyd Industrial Gloss Enamel.
- *Third Coat - 4308 DEVGUARD Alkyd Industrial Gloss Enamel.

Colors selected by Architect.

4. PVC (Plumbing and HVAC Vents)

- *Primer: XIM primer and sealer
- *Top Coat: 4200 DEVFLEX water base acrylic

Colors selected by Architect.

5. Fiber Cement Panels

- *First Coat: 2000 Acrylic Latex Primer
- *Second Coat: 2201 DULUX-ULTRA Acrylic Latex
- *Third Coat: 2201 DULUX-ULTRA Acrylic Latex

d. Interior Work.

1. Woodwork and Wood Trim - Stained Finish

- *First Coat - 1700 WOODPRIDE Oil Wood Finishing Stain

Colors selected by Architect.

- *Second Coat - 1908 WOODPRIDE Polyurethane Gloss Varnish thinned with one pint of mineral spirit per gallon.

- *Third Coat - 1902 WOODPRIDE Polyurethane Satin Varnish

- *Fourth Coat - 1902 WOODPRIDE Polyurethane Satin Varnish.

Sand between coats with #000 sandpaper.

2. Woodwork and Wood Trim - Painted Finish

- *First Coat - 1120 ULTRA-HIDE Alkyd Wood Undercoater.
- *Second Coat - 1516 ULTRA-HIDE Alkyd Semi-Gloss Enamel.

*Third Coat - 1516 ULTRA-HIDE Alkyd Semi-Gloss Enamel.

Colors selected by Architect.

3. Metal Work (Ferrous only)

*First Coat - 4130 DEVSHIELD Rus Penetrating Metal Primer

*Second Coat - 1516 ULTRA-HIDE Alkyd Semi-Gloss Enamel.

*Third Coat - 1516 ULTRA-HIDE Alkyd Semi-Gloss Enamel.

Colors selected by Architect.

4. Metal Work (Galvanized)

*First Coat - 4120 DEVGUARD All Purpose Metal and Galvanized Primer.

*Second Coat - 1516 ULTRA-HIDE Alkyd Semi-Gloss Enamel.

*Third Coat - 1516 ULTRA-HIDE Alkyd Semi-Gloss Enamel.

Colors selected by Architect.

5. Metal Work (Aluminum)

*First Coat – 4020 Devflex DTM primer

*Second Coat - 1516 ULTRA-HIDE Alkyd Semi-Gloss Enamel.

*Third coat - 1516 ULTRA-HIDE Alkyd Semi-Gloss Enamel.

6. Dry Walls: Shall be clean, blemishes repaired with spackling compound, sanded smooth and spot primed.

*First Coat – 1260 Primer Sealer

*Second Coat - 1201 ULTRA-HIDE Flat Wall Paint plus any color for tinting.

*Third Coat - 1201 ULTRA-HIDE Flat Wall Paint plus any color for tinting.

Colors selected by Architect.

7. Exposed Masonry Block Walls.

Enamel:

*First Coat - 4000 BLOXFIL Heavy Duty Acrylic Block Filler.

*Second Coat - 4328 DEVSHIELD Alkyd Urethane Gloss Enamel.

*Third Coat - 4328 DEVSHIELD Alkyd Urethane Gloss Enamel.

Colors selected by Architect.

Epoxy:

*First Coat - 4000 BLOXFIL Heavy Duty Acrylic Block Filler.

*Second Coat - 4508 TRU-GLAZE Chemical Resistant Epoxy Coating.

*Third Coat - 4508 TRU-GLAZE Chemical Resistant Epoxy Coating

Colors selected by Architect.

05. Workmanship.

a. All work shall be done in a workmanlike manner by skilled mechanics. All materials shall be evenly spread and smoothly flowed on, and shall be free from runs and sags, and no paint, varnish or enamel shall be applied until the preceding coat is thoroughly dry and hard. ALL PAINT TO BE BRUSHED OR ROLLED, NO SPRAYING WILL BE ACCEPTED.

b. No exterior paint shall be done in rainy, damp, or frosty weather, nor until surface is thoroughly dry.

c. No interior painting shall be permitted until building has been thoroughly dried out by artificial heat.

d. In general, and unless otherwise recommended and specified, exterior oil paints shall be allowed to dry at least 48 hours between coats, and interior paints shall be allowed to dry at least 24 hours between coats.

e. Enamels and varnishes shall be allowed to dry at least 48 hours between coats unless noted in the detail specifications, and shall be sanded lightly between coats with #0 sandpaper, and dusted before succeeding coat is applied.

f. After applying paste wood fillers, excess filler shall be carefully and neatly cleaned from surface by rubbing across grain. All nail holes shall be filled with spackle, tinted to match finish.

END OF SECTION

DIVISION 10 SPECIALITIES

SECTION 10522 - FIRE EXTINGUISHERS AND CABINETS

01. Scope.

This Section includes furnishing all materials, labor, equipment, tools, transportation, and storage for complete installation of fire extinguishers and cabinets shown on drawings and specified herein.

02. Materials.

a. Fire Extinguishers - Furnish and install 10 lb. multi-purpose dry chemical fire extinguishers as manufactured by J. L. Industries Model # Cosmic 10E, except in kitchen see below, or approved equal. See drawings for locations and quantity. If fire extinguisher is shown in kitchen provide type K extinguisher in kitchen.

b. Fire Extinguisher Cabinets - Furnish and install fire-rated semi-recessed cabinet as manufactured by J. L. Industries Series Academy Aluminum # 1026F10FX with pull (10-1/2" x 24" x 6" with flat trim and made of aluminum), or approved equal. See drawings for locations and quantity.

c. In Kitchen provide J.L. Industries Model # Saturn 25 with MB810 wall bracket or approved equal. Locate where directed on job.

03. Installation.

a. Install items included in this section in locations and at mounting heights indicated, or if not indicated, at heights to comply with applicable regulations of governing authorities.

b. Prepare recesses in walls for fire extinguisher cabinets as required by type and size of cabinet and style of trim and to comply with manufacturer's instructions.

c. Securely fasten mounting brackets and fire extinguisher cabinets to structure, square and plumb, to comply with manufacturer's instructions.

d. Where exact location of cabinets and bracket-mounted fire extinguishers is not indicated, locate as directed by Architect.

04. Submittals.

Contractor shall submit four (4) copies of cut sheets showing fire extinguishers and cabinets for approval by Architect.

END OF SECTION